

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-018454**Date Inspected:** 07-Dec-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC)**Location:** Shanghai, China**CWI Name:** Li Yang and Zhu Zhong Hai**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Trial Assembly**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) at Trial Assembly Areas

Segment 12AW to Segment 12BW (Root Gap and Offset)

This QA Inspector performed Dimension Control Inspection Caltrans QA Inspector Mr. Murugan Manikandan on Dec 07, 2010 for measuring root gap and offset at the Transverse Splice for the Segment 12AW to Segment 12BW between Panel Point (PP) 112.5 to PP 113 at the following locations:

Work Point W5 towards Work Point W6 (Edge Panel Cross Beam Side).

Work Point W6 towards Work Point W4 (Side Panel Cross Beam Side).

Work Point W4 towards Work Point W3 (Bottom Panel).

Work Point W3 towards Work Point W1 (Side Panel Counter Weight Side).

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Work Point W1 towards Work Point W2 (Edge Panel Counter Weight Side).

Work Point W2 towards Work Point W5 (Deck Panel).

The QA Inspector measured the root gap using 1(One) taper gauge and measured the offset using a bridge cam gauge.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Bike Path at Bay # 10

This QA Inspector performed Dimension Control Inspection on the Bike Path bottom plate for flatness check across the longitudinal butt weld. Flatness check was performed on following mentioned Bike Paths and Bike Path are identified as:

BK004A-025

The QA Inspector measured the flatness using 600mm long straight edge across the Butt (CJP) weld and using 1500mm long straight edge, measured flatness between the stiffeners.

Observed flatness within the allowable tolerance.

The results of the inspection were informed to Caltrans Lead Inspector Mr. Mark Miller and Mr. Hiranch Patel.

Segment 11AE (Catwalk)

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for Catwalk structure which is installed at Bottom Panel T-Ribs between Panel Points (PP) 95 to PP 96 and PP 96 to PP 97 for Segment 11AE. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00565 Dated December 07, 2010.

Bolt sizes used were M16 x 40 RC Set# DHGM160045 and final torque required was 180 N-m.

Bolt sizes used were M16 x 50 RC Set# DHGM160011 and final torque required was 200 N-m.

The Manual Torque wrench used was Serial No. XO2-819.

Please reference the pictures attached for more comprehensive details.

Segment 11BE (Catwalk)

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for Catwalk structure which is installed at Bottom Panel T-Ribs between Panel Points (PP) 97 to PP 98; PP 98 to PP 99 and PP 99 to PP 100 for

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Segment 11BE and between PP 98 to PP 98.5 Catwalk structure installed at Side Panel Cross Beam side. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00565 Dated December 07, 2010.

Bolt sizes used were M16 x 40 RC Set# DHGM160045 and final torque required was 180 N-m.

Bolt sizes used were M16 x 50 RC Set# DHGM160011 and final torque required was 200 N-m.

The Manual Torque wrench used was Serial No. XO2-819.

Segment 11CE (Catwalk)

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for Catwalk structure which is installed at Bottom Panel T-Ribs between Panel Points (PP) 100 to PP 101; PP 101 to PP 102 and PP 102 and PP 103 for Segment 11CE. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00565 Dated December 07, 2010.

Bolt sizes used were M16 x 40 RC Set# DHGM160045 and final torque required was 180 N-m.

Bolt sizes used were M16 x 50 RC Set# DHGM160011 and final torque required was 200 N-m.

The Manual Torque wrench used was Serial No. XO2-819.

Segment 11DE (Catwalk)

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for Catwalk structure which is installed at Bottom Panel T-Ribs between Panel Points (PP) 103 to PP 104; PP 104 to PP 105 and PP 105 to PP 106 for Segment 11DE and between PP 104 to PP 104.5 Catwalk structure installed at Side Panel Cross Beam side. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00565 Dated December 07, 2010.

Bolt sizes used were M16 x 40 RC Set# DHGM160045 and final torque required was 180 N-m.

Bolt sizes used were M16 x 50 RC Set# DHGM160011 and final torque required was 200 N-m.

The Manual Torque wrench used was Serial No. XO2-819.

Segment 11EE (Catwalk)

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for Catwalk structure which is installed at Bottom Panel T-Ribs between Panel Points (PP) 106 to PP 107 and PP 107 and PP 108 for Segment 11EE. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00565 Dated December 07, 2010.

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Bolt sizes used were M16 x 40 RC Set# DHGM160045 and final torque required was 180 N-m.

Bolt sizes used were M16 x 50 RC Set# DHGM160011 and final torque required was 200 N-m.

The Manual Torque wrench used was Serial No. XO2-819.

Segment 11EE (Corner Assembly hold back weld)

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as CA093-006. The welder identification was 040320 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-Tc-U4b-FCM-1. The piece mark was identified as Deck Panel to Corner Assembly Edge Panel at work point E5.

Please reference the pictures attached for more comprehensive details.

Segment 12AE (Corner Assembly hold back weld)

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as CA3001AA-001. The welder identification was 040320 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-Tc-U4b-FCM-1. The piece mark was identified as Deck Panel to Corner Assembly Edge Panel at work point E5.

Segment 12AW to Segment 12BW (T-Rib CJP)

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as BP3020-001-022. The welder identification was 057333 and was observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-B-P-2213-B-U2-FCM-1. The piece mark was identified as the Bottom Panel T-Ribs web at transverse splice weld.

Please reference the pictures attached for more comprehensive details.

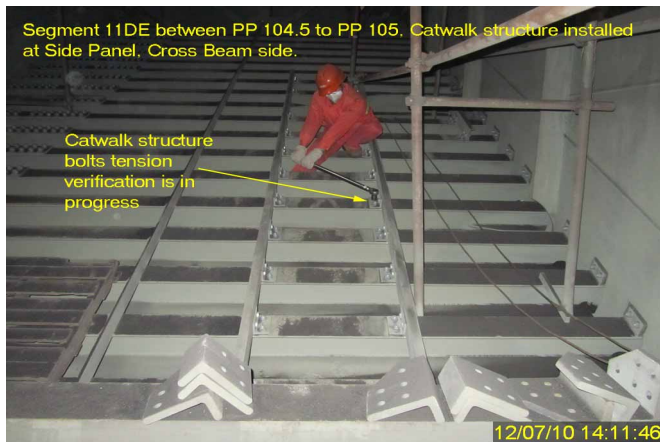
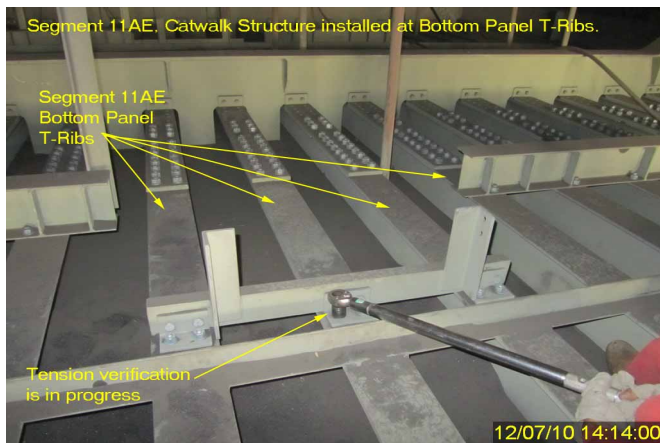
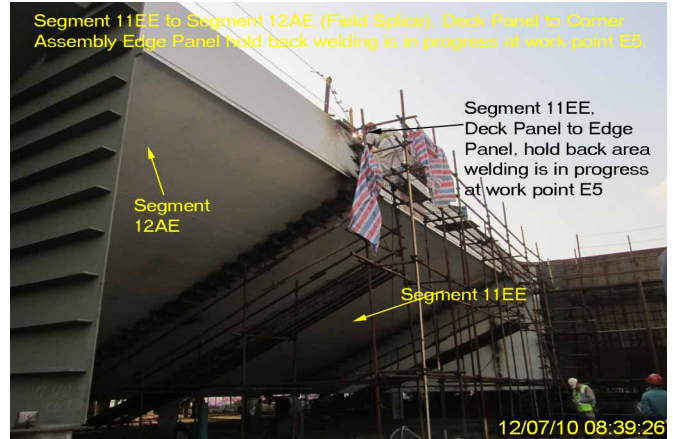
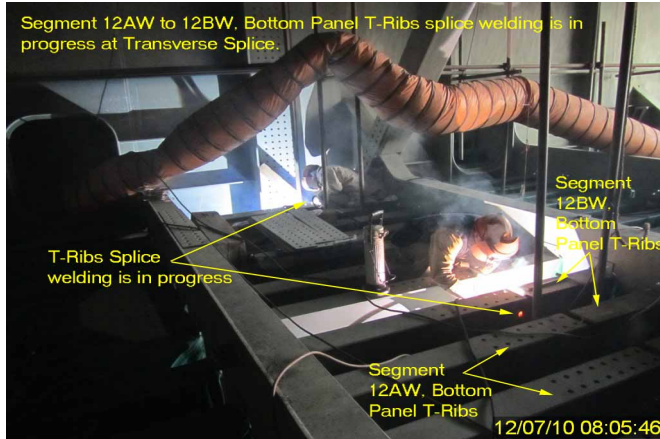
Segment 12AW to Segment 12BW (T-Rib CJP)

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as BP3048-001-076. The welder identification was 046704 and was observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-B-P-2213-B-U2-FCM-1. The piece mark was identified as the Bottom Panel T-Ribs web at transverse splice weld.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

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Summary of Conversations:

No relevant conversations were reported on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 150000422372, who represents the Office of Structural Materials for your project.

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Inspected By:	Math,Manjunath	Quality Assurance Inspector
Reviewed By:	Dsouza,Christopher	QA Reviewer
